

What is claimed is:

- 1 1. A transmitter comprising:
2 a first circuit coupled to an input port of the transmitter; and
3 a second circuit coupled to the first circuit and to an output port of the transmitter,
4 wherein the first circuit is sized with respect to the second circuit such that for a pulse
5 signal applied to the input port, the transmitter generates an output signal having a rise-
6 time and a fall-time that are substantially equal at the output port.
- 1 2. The transmitter of claim 1, wherein the first circuit includes an inverter.
- 1 3. The transmitter of claim 2, wherein the inverter includes a *n*-type metal-oxide
2 semiconductor field-effect transistor connected in series with an *p*-type metal-oxide
3 semiconductor field-effect transistor.
- 1 4. The transmitter of claim 3, wherein the *n*-type metal-oxide semiconductor field-
2 effect transistor is larger than the *p*-type metal-oxide semiconductor field-effect
3 transistor.
- 1 5. The transmitter of claim 3, wherein the *n*-type metal-oxide semiconductor field-
2 effect transistor is between about two and about three times larger than the *p*-type metal-
3 oxide semiconductor field-effect transistor.
- 1 6. The transmitter of claim 1, wherein the second circuit includes a plurality of
2 driver circuits.
- 1 7. The transmitter of claim 6, wherein each of the plurality of driver circuits includes
2 a *p*-type metal-oxide semiconductor field-effect transistor connected in series with an *n*-
3 type metal-oxide semiconductor field-effect transistor.

1 8. The transmitter of claim 7, wherein the *p*-type metal-oxide semiconductor
2 field-effect transistor is sized to source a first current and the *n*-type metal-oxide
3 semiconductor field effect transistor is sized to sink a second current substantially equal
4 to the first current.

1 9. The transmitter of claim 7, wherein the second circuit is connected to an
2 equalization control circuit.

1 10. The transmitter of claim 9, wherein the equalization control circuit provides de-
2 emphasis.

1 11. The transmitter of claim 1, wherein the transmitter transmits at a signal level and
2 the first circuit and the second circuit are coupled to a supply potential having a value of
3 about twice the signal level.

1 12. A method comprising:
2 receiving a signal at a first circuit;
3 in a second circuit coupled to the first circuit, the second circuit including a
4 plurality of *p*-type metal-oxide semiconductor field-effect transistors, enabling the
5 plurality of *p*-type metal-oxide semiconductor field-effect transistors to drive a
6 transmission line; and
7 enabling less than the plurality of the *p*-type metal-oxide semiconductor field-
8 effect transistors to drive the transmission line.

1 13. The method of claim 12, wherein receiving a signal at a first circuit includes
2 receiving a digital signal.

1 14. The method of claim 13, wherein enabling the plurality of *p*-type metal-oxide
2 semiconductor field-effect transistors to drive a transmission line includes enabling the
3 plurality of *p*-type metal-oxide semiconductor field-effect transistors substantially
4 simultaneously.

1 15. The method of claim 14, wherein enabling less than all of the *p*-type metal-oxide
2 semiconductor field-effect transistors to drive the transmission line comprises enabling
3 less than all of the *p*-type metal-oxide semiconductor field-effect transistors substantially
4 simultaneously.

1 16. A system comprising:
2 a transmitter including:
3 a first circuit coupled to an input port of the transmitter; and
4 a second circuit to couple the first circuit to an output port of the
5 transmitter, the second circuit coupled to an equalization control circuit;
6 a receiver; and
7 a transmission line to couple the output port of the transmitter to the receiver.

1 17. The system of claim 16, wherein the first circuit including an inverter having a *p*-
2 type metal-oxide semiconductor field-effect transistor and an *n*-type metal oxide
3 semiconductor field-effect transistor, the *n*-type metal-oxide semiconductor field-effect
4 transistor being between about two and about three times larger than the *p*-type metal
5 oxide semiconductor field-effect transistor.

1 18. The system of claim 17, wherein the second circuit includes a voltage driver.

1 19. The system of claim 18, wherein the second circuit includes a controllable source
2' impedance.

1 20. A system comprising:
2 a first processor including a transmitter comprising:
3 a first circuit coupled to an input port of the transmitter; and
4 a second circuit coupled to the first circuit and to an output port of the
5 transmitter, wherein the first circuit is sized with respect to the second circuit such
6 that for a pulse signal applied to the input port, the transmitter generates an output
7 signal having a rise-time and a fall-time that are substantially equal at the output
8 port; and
9 a second processor including a receiver coupled to the transmitter through a
10 transmission line.

1 21. The system of claim 20, wherein the first processor includes a very long
2 instruction word processor.

1 22. The system of claim 21, wherein the second processor includes a complex
2 instruction set processor.

1 23. The system of claim 22, further comprising an equalization control circuit coupled
2 to the second circuit to provide de-emphasis equalization.